of it, this statement implies that there is *a* mental and *an* organic sphere, which may be treated as if each stood in isolation from the other. Whether such an idea be compatible with the Theory of Evolution appears very problematical. Be this as it may, the precise problem of Epistemology is just the question, *can* there be any sphere *for man*, in which anything may be regarded as if it were out of relation to mind, or to 'the mental,' using the more abstract language supplied us? Till this has been determined—and many advance valid reasons for concluding that it has been determined in the negative—discussion of 'teleology' and the like is so much beating the air.

But, fortunately, there happens to be far more community between Brooks and Ward than the printed page reveals. That Brooks should be moved to consider Ward's book at all, that he should attack some of the questions so significantly discussed in his brilliant 'Foundations of Zoology,' and that Ward should go entirely to the positive sciences for his materials are right hopeful signs of the times. No doubt Brooks' review bears witness to an appreciable remnant of that estrangement between science and philosophy which was at its height in the sixties and seventies. In the seventeenth and eighteenth centuries Descartes, Spinoza, Leibniz and Kant drew their materials from the sciences as then formulated; and the 'plain historical way' of Locke, and to some extent of Hume, commended itself to the sober methods of scientific inquiry. But at the beginning of the nineteenth century, thanks to the new 'social sense' that arose with Lessing and Herder and Goethe, philosophy forsook its commerce with the natural sciences and sought aid from the so-called human sciences, especially in those aspects which may be lumped under the name *Culturgeschichte*. This movement reached its zenith with Hegel and his followers. Meanwhile, the natural sciences, particularly in that development of them which Brooks ornaments, had themselves taken up and projected along new lines the very suggestions of the *Culturgeschichte* group, and had summed the results in the term Evolution. This term, as we now understand it, is no more than half a century old, a brief period in the life of any great operative conception, and we are far from clearly perceiving all it implies. "There is 'something more' at work," as Romanes said to me time and again. Ward's book is a product of this conviction of ignorance, so is Brooks' review. Further, the book must be taken as a powerful witness to the return of philosophy to the old, amicable relationship of the seventeenth and eighteenth centuries. The pressing affair of philosophy is to elicit the implications of theories which are not simply provisional groupings of phenomena scientifically observed, but profess to be *Weltansichten*. Just because they are at once scientific and philosophical, neither the scientist nor the philosopher can deal with them in his own corner. Brooks and Ward are at one in proving this. Indeed, the most interesting—some would say the most promising—factor in contemporary intellectual activity crops out in the fact that scientists are becoming more and more alive to philosophical problems, while philosophers are beginning to discover that, after all, their main concern is with the fundamental conceptions incident to that highly organized portion of human experience which goes by the name of science. Each side will better the prospect for a more thoroughly rational explanation of things known and to know by foregoing its own *idola*.

I should not have ventured to intrude at this 'great assize' but for the fact that Brooks attributes to Ward *idola* from which the Cambridge epistemologist has shaken free. On the other hand, and far more important, Brooks himself has already escaped many others which, in the not very distant past, generated that amazing hybrid—a mechanical biology.

R. M. Wenley.
University of Michigan.

THE ORIGIN OF MEASUREMENTS.

To the Editor of Science: My small boy, aged 5 years, was discovered this summer to have originated a system of measurement which he used in conversation with other children. Certain distances were described as four men, and certain other distances were spoken of as a boy or half a boy. Certain others were spoken of as two men and a boy. Perhaps this may

be of interest in connection with the origin of measurements by the foot, the span, the hairsbreadth, etc.

H. H. CLAYTON.

BLUE HILL, MASS., September 5, 1899.

THE FAUNA OF PORTO RICO.

TO THE EDITOR OF SCIENCE: It is somewhat surprising to find in the current number of SCIENCE (Sept. 1, p. 286), a paper by Dr. Mark W. Harrington on the 'Fauna and Flora of Puerto Rico,' which shows the writer to have, in some respects, less knowledge of West Indian mammal and bird life than was possessed by the discoverer of these islands. Columbus, in his journals, comments on the absence of large animals in the islands which he visited and states that the only land mammal found was the Hutia, or Utia, on which he was feasted by the natives of the Bahamas, Hayti and San Domingo, and Cuba. In the last named island the animal is still common under this name,* three species being known, viz., *Capromys pilorides*, *C. melanurus*, and *C. prehensilis*. The remaining members of the genus are *Capromys brachyurus*, of Jamaica, now supposed to be on the verge of extinction, largely through the ravages of the Mongoose; *C. thoracatus*, a nearly allied form discovered by Townsend in Swan Island, and the remarkably distinct *C. ingrahami*, described by Allen from the Plana Keys, Bahamas, in 1891, when for first time Columbus' mention of the Utia in the Bahamas was given a scientific status. In Hayti and San Domingo there occurs a member of the same Histricomorphine family (Octotontidæ), *Plagiodonti ædium*, an exceedingly rare animal of which little is known, and this, with the six species of *Capromys* named, two species of *Solendon*—one each from Cuba and Hayti—and a small species of *Oryzomys* from Jamaica, constitutes the entire known indigenous terrestial mammalian fauna of the Greater Antilles; there being, therefore, no indigenous land mammal recorded from Porto Rico. For this reason it is with no small interest we find your correspondent saying of the 'wild fauna' of Porto Rico: "Generally speaking, the largest wild mammal is a ground squirrel, about the size of a gopher. A few others of larger size are reported from time to time, but they are only occasional and are probably animals escaped from cultivation. Probably the larger animals once existed, and their traces could doubtless be found by a linguist in the place names which abound all over the island and are quite often not Spanish * * *."

The 'squirrel' mentioned is as yet unknown to students of the Greater Antillean fauna, who have also failed to discover, either in the records of man or nature, any evidence of the former existence of large mammals in these islands.

In respect to birds, it appears that both your correspondent and Columbus found 'Nightingales' in the West Indies; an error as pardonable 400 years ago as it is inexcusable to-day.

FRANK M. CHAPMAN.

AMERICAN MUSEUM OF NATURAL HISTORY,
September 7, 1899.

*In Hill's recently published 'Cuba and Porto Rico' (p. 55), this animal is miscalled 'Agouti.' Only one species is said to occur in Cuba, and the creature is stated to be found in the Windward Islands, but not in Jamaica, whereas the reverse is true. There is, however, in the Windward Islands a true Agouti (*Dasyprocta cristata*), the only member of the genus occurring in the West Indies.

METHODS FOR A CARD INDEX.

IN the last number of SCIENCE Professor Porter, of the Harvard Medical School, outlines a plan for a card *Centralblatt* of physiology, which when carried into effect will greatly smooth the way for students of physiology and related sciences. I am not, however, sure that the plan proposed is the most practicable. A card index is without doubt the most convenient form of an index, chiefly because it can be continually and homogeneously increased. It is, however, bulky and somewhat inconvenient to use, and hence, I think, not suited for the publication of abstracts, especially when they extend beyond the limits of a single card. The most convenient and economical method of storing printed matter is in the form of books on a shelf. The card catalogue should be an index to these books.

There should be for each of the sciences *Centralblätter* or series of abstracts and probably one in each leading country so as to secure